Completed Energy Conservation Project Case Study

United States Department of Energy
Office of Environmental Management
Fact Sheet

Energy Conservation Program in the Business Division

Los Alamos National Laboratory

Original Problem

The Otowi building is one of the older buildings at the Los Alamos National Laboratory. Energy costs for Otowi were higher per unit area than for newer office buildings.

The Project Solution

The Otowi building was retrofitted with features to improve its energy efficiency. Incandescent light bulbs and exit signs were replaced with more efficient fixtures. Occupancy sensors were installed in rooms to turn on lights, computer monitors, and printers when a person enters the room and off after the person exits. The solar hot water system on the roof was upgraded to provide much of the energy needed to heat water used in the cafeteria and bathrooms. Automatic electricity meters were installed at Otowi to remotely monitor real-time energy use. Employees no longer have to spend time reading meters on site.

Value of Improvement

The estimated reduction in electricity costs at Otowi is over $160,000 per year due to the energy efficiency improvements. After the payback period of three years, all of the savings will belong to the Lab. Greater energy efficiency decreases demand on the power plant. Lower output from the power plant decreases air pollution. Lower demand also means that the power plant has more surplus capacity that could be used in the event of an emergency.

Lifecycle Waste Reduction	
Lifecycle Waste Reduction	NA
Commencement Date	2002
Project Useful Life (Years)	Indefinite

DOE Monetary Benefits	
Total Project Cost	~$450,000
Lifecycle Savings	~$160,000 / year
Return on Investment	NA

Benefits At-A-Glance

- Energy savings to the Laboratory from the upgrades to Otowi will save about $160,000 annually.
- Better energy efficiency reduces demand on the power plant and decreases air pollution.
- Real-time energy use can be monitored remotely, saving time for employees that used to read electricity meters at Otowi.

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Summary Data	
Priority Area:	Energy Conservation
Project Type:	Cost Reduction
Total Project Cost:	~$450,000
Lifecycle Savings:	~$160,000 per year in reduced energy costs.
Implementing Group:	Utilities and Infrastructure Group
Benefiting Group:	Business Division + others in Otowi building.
Useful Life Years:	Indefinite
Return on Investment:	NA
Lifecycle Waste Reduction:	NA
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